

1. Approving Civil Aviation  
Authority/Country:

2.

3. Form Tracking Number:

FAA/United States

# AUTHORIZED RELEASE CERTIFICATE

RMA95905

FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG

4. Organization Name and Address:

FAA APPROVED REPAIR STATION NO. AH4R050M  
ASTRONICS ADVANCED ELECTRONIC SYSTEMS, 12950 WILLOWS RD. N.E.  
KIRKLAND, WA 98034

5. Work Order/Contract/Invoice Number:

S191151

6. Item:

7. Description:

8. Part Number:

9. Quantity:

10. Serial Number:

11. Status/Work:

1

IN-SEAT POWER SUPPLY, AC, 2 OUTPUT, CIRCULAR

1191-38

1

096609

MODIFIED

12. Remarks:

The work specified has been accomplished in accordance with CMM 25-21-11 Rev 4, 03 Jan 2018  
Incorporated Mod B IAW SB 1191-25-02 Rev New, 27 Oct 2014.  
Hardware is Mod: B

Certifies that the work specified in block 11/12 was carried out in accordance with EASA Part 145 and in respect to that work the component is considered ready for release to service under EASA  
Part-145 Approval Number: EASA.145.4787.

The aircraft component identified above was tested and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details  
of the work performed are on file at this repair station under work order in block 5.

13a. Certifies the items identified above were manufactured in conformity to:

☐ Approved design data and are in a condition for safe operation.

☐ Non-approved design data specified in Block 12.

14a.

☒ 14 CFR 43.9 Return to Service

☒ Other regulation specified in Block 12

Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described  
in Block 12 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43  
and in respect to that work, the items are approved for return to service.

13b. Authorized Signature:

13c. Approval/Authorization No.:

14b. Authorized Signature:

14c. Approval/Certificate No.:

13d. Name (Typed or Printed):

13e. Date (dd/mm/yyyy):

14d. Name (Typed or Printed):

14e. Date (dd/mm/yyyy):

MARY FRY

26 JUN 2018

AH4R050M

## User/Installer Responsibilities

It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article.

Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in Block 1,  
it is essential that the user/installer ensures that his/her airworthiness authority accepts aircraft engine(s)/propeller(s)/article(s) from the airworthiness authority of the country specified in Block 1.

Statements in Blocks 13a and 14a do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the  
user/installer before the aircraft may be flown.



WOW AIR

15989

1191-38

609960

NA

R01258.1191

S191151

A

B

6/14/2018

2/22/2013

3/13/2013

UNITS SENT IN FOR MOD B

**Electrical:** Passed incoming power on BIT.

Modification: Incorporate Mod B.

[illegible]

NA

**Cust Resp: Yes - Mod**

**Yes**

**NFF Cosm:** Yes

Acceptance Test: ATE Minh Nguyen(MTNGUYEN)

6/21/2018

The aircraft component identified above was tested/repaired/modified and inspected in accordance with current regulations of the Federal Aviation Agency and is approved for return to service. Pertinent details of the work performed are on file at this repair station under the above RMA number.

### Final Inspection:

Mary Fry 06/26/2018

for Astronics AES

FAA Approved Repair Station AH4R050M

**ATP ACCEPTANCE TEST REPORT**

ATP Core SW: SM1307-004 Rev A

ATP Test Script: SM1191-006-038 Rev D, 1191-38 ATP.xml

ATP Test Lib: SM1191-006 Rev Y

Astronics P/N: 1191-38

S/N: 096609

Run Time: 06/21/18 09:19:57

Test Personnel: \_\_\_\_\_

Date: JUN 21 2018

Quality Assurance: \_\_\_\_\_

Date: JUN 26 2018

Computer Name: W7T1980

User: apctest

Test Result: **PASS**

Step	Description	Value	Result
4.1.9	Verify AC source settings: 115VAC 400Hz	114.59 399.97	PASS
5.1.3a	400Hz Power LEDs are ON: 0.0V to 1.0V	0.83 0.84 0.83	PASS
5.1.3b	IN-USE LEDs are ON: -1.0V to 2.5V	1.60 1.51	PASS
5.1.4	RS-485 Address Data = 0xB	0xB	PASS
5.1.6	Software Version Number = R03.00	R03.00	PASS
5.1.7	Program UUT Serial Number	'096609'	PASS
5.2.8	LED_V (In-Use A) is OFF: 4.5VDC to 5.5VDC	4.6565	PASS
5.3.1	Internal Temperature (RS-485 readback): 18C to 30C	23.0000	PASS
5.4.2	RS-485 Address Data = 0xB	0xB	PASS
5.4.5	RS-485 Address 2 Data = 0x13	0x13	PASS
5.4.8	RS-485 Address 3 Data = 0x23	0x23	PASS
5.4.11	RS-485 Address 4 Data = 0x43	0x43	PASS
5.4.17	RS-485 Address 1 Data = 0xB	0xB	PASS
5.5.1a.1-AMCU	AMCU to RESTRICTED; Turn Off In-Use LEDs		PASS
5.5.1a.2-AMCU	PWR IN Data Line: 9.5VDC to 14.5VDC	12.2314	PASS
5.5.1b.1-AMCU	Pwr Avail LEDs are OFF: -1.0V to 1.0V	0.0 0.0	PASS
5.5.1b.2-AMCU	In-Use LEDs are OFF: 2.5V to 5.0V	3.68 3.91	PASS
5.5.1c-AMCU	RS-485 DISABLED Indicator: F0 78 01	F0 78 1	PASS
5.5.2a-AMCU	AMCU to ENABLED; Pwr Avail LEDs are GREEN: 1.0V to 2.5V	2.07 2.06	PASS
5.5.2b-AMCU	RS-485 ENABLED Indicator: F0 20 02	F0 20 2	PASS
5.5.3a-AMCU	In-Use LEDs are ON: -1.0V to 2.5V	1.59 1.50	PASS
5.5.3b-AMCU	RS-485 ENABLED Indicator: F6 20 02	F6 20 2	PASS
5.5.4a-AMCU	In-Use LEDs are ON: -1.0V to 2.5V	1.60 1.51	PASS
5.5.5a-AMCU	In-Use LEDs are OFF: 2.5V to 5.0V	3.85 3.87	PASS
5.5.5b-AMCU	Pwr Avail LEDs are OFF: -1.0V to 1.0V	0.0 0.0	PASS
5.5.6a-AMCU	In-Use LEDs are OFF: 2.5V to 5.0V	3.68 3.93	PASS
5.5.6b-AMCU	Pwr Avail LEDs are OFF: -1.0V to 1.0V	0.00 0.0	PASS
5.6.1	Individual Mode; Turn Off In-Use LEDs		PASS
5.6.5	In-Use LED 2 is ON (-1.0V to 2.5V)/LED 3 is OFF	1.59 3.89	PASS
5.6.7	In-Use LED 3 is ON (-1.0V to 2.5V)/LED 2 is OFF	3.87 1.50	PASS
5.7.1	Change Load Mangement Limits to 250VA/225VA/200VA	250 225 200	PASS
5.8.2	AC #2 No Load Voltage: 111VAC to 121VAC	115.9127	PASS
5.8.4a	AC #2 @150W Full Load Voltage: 104.5VAC to 115.5VAC	108.0461	PASS
5.8.4b	AC #2 Frequency: 57Hz to 63Hz	59.3824	PASS
5.8.4c	AC #2 @150W Power (RS-485) Full Load: 135VA to 165VA	144VA	PASS
5.9.2	AC #3 No Load Voltage: 111VAC to 121VAC	115.7552	PASS
5.9.3a	AC #3 @150W Full Load Voltage: 104.5VAC to 115.5VAC	108.3132	PASS
5.9.3b	AC #3 Frequency: 57Hz to 63Hz	59.3120	PASS
5.9.3c	AC #3 @150W Power (RS-485) Full Load: 135VA to 165VA	142VA	PASS
5.11.4a.1	AC #2 @150W: Pwr Avail LED GREEN Full Load: 1.0V to 2.5V	2.0600	PASS
5.11.4a.2	AC #2 @150W: AC Out LED ON Full Load: -1.0V to 1.5V	0.9200	PASS
5.11.4c.1	AC #2 200W Overload: Pwr Avail LED OFF: -1.0V to 1.0V	0.0000	PASS
5.11.4c.2	AC #2 200W Overload: AC Out LED OFF: 2.5V to 5.0V	3.7900	PASS
5.12.4a.1	AC #3 @150W: Pwr Avail LED GREEN Full Load: 1.0V to 2.5V	2.0500	PASS
5.12.4a.2	AC #3 @150W: AC Out LED ON Full Load: -1.0V to 1.5V	0.9200	PASS
5.12.4c.1	AC #3 200W Overload: Pwr Avail LED OFF: -1.0V to 1.0V	0.0000	PASS
5.12.4c.2	AC #3 200W Overload: AC Out LED OFF: 2.5V to 5.0V	4.0100	PASS



5.12.9a	Cycle input power; Load Mgmt Limits to 250VA/225VA/200VA	250 225 200	PASS
5.13.4	USB B No Load Voltage: 4.5VDC to 5.5VDC	5.1103	PASS
5.13.5	USB C No Load Voltage: 4.5VDC to 5.5VDC	5.1172	PASS
5.13.7b	USB B Full Load Voltage 4.5VDC to 5.5VDC	5.1040	PASS
5.13.7c	USB C Full Load Voltage 4.5VDC to 5.5VDC	4.9737	PASS
5.14.2	400Hz Input Current: 1.8A to 2.39A	2.2186	PASS
5.14.3	400Hz Power Factor greater than 0.99	0.9995	PASS
5.14.8	AC Source to 115VAC, 800Hz	114.01 799.94	PASS
5.14.10	800Hz Input Current with Full Load: 1.8A to 2.4A	2.2294	PASS
5.14.10a	800Hz Power Factor greater than 0.98	0.9978	PASS
5.14.5	AC Source to 115VAC, 400Hz		PASS
5.14.6	400Hz No Load Input Power: 3.0VA to 14.0VA	10.0900	PASS
5.15.6a	AC #2 @75W: Pwr Avail LED GREEN Nom Load: 1.0V to 2.5V	2.0600	PASS
5.15.6a.1	AC #2 @75W: AC Out LED ON Nom Load: -1.0V to 1.5V	0.8900	PASS
5.15.6b	AC #2 Shorted Load: Pwr Avail LED OFF: -1.0V to 1.0V	0.0000	PASS
5.15.6c	AC #2 Shorted Load: AC Output: 111VAC to 121VAC	115.5711	PASS
5.15.9a	AC #3 @75W: Pwr Avail LED GREEN Nom Load: 1.0V to 2.5V	2.0500	PASS
5.15.9a.1	AC #3 @75W: AC Out LED ON Nom Load: -1.0V to 1.5V	0.8900	PASS
5.15.9b	AC #3 Shorted Load: Pwr Avail LED OFF: -1.0V to 1.0V	0.0000	PASS
5.15.9c	AC #3 Shorted Load: AC Output: 111VAC to 121VAC	115.5995	PASS
5.15.13b	USB B Short Test: USB Voltage: 4.5VDC to 5.5VDC.	5.1103	PASS
5.15.13c	USB C Short Test: USB Voltage: 4.5VDC to 5.5VDC.	5.1153	PASS
5.16.14a	GFI #2 Cycle 400Hz Input Power and Check BIT	240.0000	PASS
5.16.15a	GFI #2 Trip Time: 1ms to 30ms	6.0400	PASS
5.16.15b.1	GFI #2 Pwr Avail LEDs are RED: -5.0V to -1.0V	-1.8 -1.8	PASS
5.16.15b.2	GFI #2 AC Out LEDs are OFF: 2.5V to 5.0V	4.01 3.99	PASS
5.16.15c	GFI #2 In-Use LEDs are blinking: less than 150ms 1200ms	105.0 1001.0	PASS
5.16.15d	GFI #2 RS-485 GFI indicator is ON	241.0000	PASS
5.16.17a	GFI #3 Cycle 400Hz Input Power and Check BIT	240.0000	PASS
5.16.18a	GFI #3 Trip Time: 1ms to 30ms	3.5600	PASS
5.16.18b.1	GFI #3 Pwr Avail LEDs are RED: -5.0V to -1.0V	-1.8 -1.8	PASS
5.16.18b.2	GFI #3 AC Out LEDs are OFF: 2.5V to 5.0V	4.01 3.98	PASS
5.16.18c	GFI #3 In-Use LEDs are blinking: less than 150ms 1200ms	105.0 999.0	PASS
5.16.18d	GFI #3 RS-485 GFI indicator is ON	241.0000	PASS

Astronics - AES		CAL REVERSE RECALL REPORT		6/21/2018
<b>Part Nbr:</b> 1191-38	<b>Part Desc:</b> IN-SEAT POWER SUPPLY,AC,2 OUTPUT,CIRCULAR		<b>Serial Nbr:</b> 096609	
<b>Part Nbr Out:</b>	<b>Part Desc Out:</b>		<b>Part Category:</b> CRR	
<b>MO/SO Nbr:</b> S191151	<b>Test Date:</b> 6/21/2018			
<b>Technician:</b> Minh Nguyen	<b>RMA Nbr:</b> RMA95905			
Control ID	Nomenclature	Status	Cal Exp Date	
12509	WT210 Digital Power Meter	Completed	11/9/2018	
12514	Multimeter/Switch System	Completed	11/8/2018	
12706	AC Programmable Power Supply	Indication Only		
13898	Oscilloscope	Completed	2/22/2019	
72959	1191 AC Load Test Fixture	Completed	2/12/2019	
72974	1191 AC Load Test Fixture	Completed	1/9/2019	
72977	1191 AC Load Test Fixture	Completed	2/12/2019	
73868	1191 In_Use LEDs and Reading Lamps Test Fixture	Completed	2/12/2019	
73974	1191 Power and Control Test Fixture	Completed	2/12/2019	
78030	Differential Probe	Completed	11/14/2018	

**Total Records = 10**